NOTIFICATION OF ADDENDUM

ADDENDUM NO. 2

DATED 6/30/2011

Control	**2256-01-019**
Project	**STP 1102(398)**
Highway	**FM 2255**
County	**LUBBOCK**

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an adendum notification which details the changes and the respective proposal pages which were added and/ or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped “This Proposal Issued for Informational Purposes.”

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: STP 1102(398) CONTROL: 2256-01-019

COUNTY: LUBBOCK

LETTING: 07/08/2011

REFERENCE NO: 0630

PROPOSAL ADDENDUMS

_ PROPOSAL COVER

_ BID INSERTS (SH. NO.:)

X GENERAL NOTES (SH. NO.: G)

_ SPEC LIST (SH. NO.:)

_ SPECIAL PROVISIONS:

ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: SEE CHANGES BELOW

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

GENERAL NOTES: SHEET G - REVISED LAST PARAGRAPH OF ITEM 302.

PLAN SHEET: 1.07C - REVISED DUE TO ABOVE CHANGE.

Project Number: STP 1102(398) **Sheet:**

County: LUBBOCK **Control: 2256-01-019**

Highway: FM 2255

GENERAL NOTES:

Hot Mix Basis of Estimate

ITEM	DESCRIPTION	RATE (approx.)
340	4 IN, HMA Ty B (alternate bid)	440 LBS/SY
344	4 IN. SP-B	440 LBS/SY
346	2 IN, SMA-D	220 LBS/SY

Provide Performance Grade PG 70-28 for all ACP.

Hot Mix Area (SY)

MIX TYPE	SY
340 HMA Ty B (alt)	79,350
344 SP-B	79,350
346 SMA-D	75,585

Surface Treatment Basis of Estimate

DESCRIPTION	PRIME COAT	FIRST COURSE
ASPH TYPE & GRADE	MC-30 or AE-P	Tier I Asphalt
ASPH RATE (GAL/SY)	0.20	0.40
AGGR TYPE		PB
AGGR GRADE		4
AGGR RATE (CY/SY)		1/110

Surface Treatment Area (SY)

PRIME COAT	1 COURSE SURF TREAT
78,690	99,059

W.W.A.R.P

Provide coarse aggregate for all surface hotmix and overlays meeting a minimum class of **A** as published in the *AGGREGATE QUALITY MONITORING PROGRAM RATED SOURCE QUALITY CATALOGUE*.

Provide coarse aggregate for all base hotmix and surface treatments meeting a minimum class of **B** as published in the *AGGREGATE QUALITY MONITORING PROGRAM RATED SOURCE QUALITY CATALOGUE*.

General Requirements and Covenants - Items 1 thru 9

Item 2 – Instructions to Bidders

Prior to contract letting, bidders may obtain a free computer diskette or a computerized transfer of files (from the Engineer's office) that contains earthwork information. If copies of the actual cross-sections in addition to, or instead of, the diskette are requested, they will be available at the Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidder's expense.

View the plans on-line or download from the web at:
http://www.dot.state.tx.us/business/plansonline/plansonline.htm

Order plans from any of the plan reproduction companies shown on the web at:
http://www.dot.state.tx.us/business/contractors_consultants/repro_companies.htm

Work may be indicated outside of TxDOT right of way. Work indicated outside of TxDOT right of way requires an agreement or easement between the property owner and TxDOT. If an agreement or easement is not executed prior to time charges beginning, this work may be deleted from the project.

Pre-letting questions will be answered by calling the Lubbock Area's Office at (806) 748-4424.

The answers will be submitted in the same format that they are received. A file containing these questions and answers will be available for review at the Lubbock Area Engineer's Office located at 135 Slaton Road, Lubbock, TX 79404.

Utilities

Overhead and underground utility installations exist within the project limits.

The Contractor will be responsible for locating all utilities and for any damages to utilities caused by the Contractor.

Item 5 - Control of the Work

When deviation from the plans is requested by the Contractor, but not required for installation, the Contractor will bear any additional costs associated with the deviation.

Alter the location of all ground boxes, foundations, and structures shown on the plans only as approved by the Engineer in writing. Contact the Engineer prior to installing ground boxes, foundations, and structures, in order that the Inspector may verify and approve the location.

Restore all areas disturbed due to trenching or any construction activity to a condition equivalent to the original condition within 14 working days from the time work began in the area including all necessary seeding.

The construction, operation and maintenance of the proposed project will be consistent with the state implementation plan as prepared by the Texas Commission on Environmental Quality.

Item 6 - Control of Materials

In addition to the requirements of the plans and specifications, make all material and equipment furnished, installed, modified, tested, or otherwise used on this contract, and becoming the property of TxDOT, fully functional within the manufacturer normal specifications, warranties, and guarantees. Make any additional functions of the material and equipment normally supplied by the manufacturer, but not specified by TxDOT, completely functional.

Item 7 – Legal Relations and Responsibilities

Maintain access to adjacent property at all times.

Coordinate street closures with the local fire, police, and other emergency personnel.

Notify, in writing, each residence and business 10 days prior to beginning construction of the phase/phases that are expected to affect their ingress and egress. This notice may be hand delivered or mailed.

When applicable, comply with all requirements of the Environmental Permits Issues and Commitments (EPIC) sheets.

Dispose of all waste materials in compliance with local, state and federal regulations. Submit a list of all approved waste sites to the Engineer for review.

Item 8 - Prosecution and Progress

Monthly schedule updates are a very important aspect of managing the progress of this project. The Engineer may withhold the monthly estimate if the schedule update has not been received.

Do not begin work before sunrise or end work after sunset unless authorized by the Engineer, and remove all equipment from the roadway before sundown.

Perform any erosion control measures such as seeding or sodding before beginning the next phase, or land, unless otherwise authorized by the Engineer.

Working days will be computed and charged in accordance with Article 8.3.A.4 Standard Workweek. Night-time work is not allowed.

Conduct operations such that all equipment is at least 30 feet from the roadway before sundown.

Item 9 - Measurement and Payment

Submit material-on-hand payment requests at least three working days prior to the end of the month for payment on that month's estimate.

Item 100 - Preparing Right Of Way

Prep ROW shall include any removal not identified in the plans regardless of nature of work, above ground or below.

Sprinkler systems shall be cut at the right of way line and plugged. Payment for this work shall be considered subsidiary.

Items 110 & 132 - Excavation & Embankment

Excavation (special) includes undercutting, removing, and disposing of undesirable material below subgrade as directed by the Engineer. Fill this volume using an approved material that meets the Ty C Embankment requirements shown below. Payment shall be subsidiary to this item.

Ty C Embankment shall conform to the following material specifications:

Liquid Limit (maximum)	45
Plasticity Index (maximum)	25
Bar Linear Shrinkage (minimum)	2

Consider all embankments to be Earth Embankment in accordance with Article 132.3.A.

Proof roll, as directed by the Engineer.

Item 161 Compost

Furnish and install Erosion Control Compost (ECC). Roll ECC lightly as directed.

Item 162 Sodding for Erosion Control

Furnish and place sod, between the edge of the roadway and the edge of the ROW, of the same variety as existing in the adjacent property. No additional compensation will be given for different varieties.

Item 164 - Seeding For Erosion Control

Notify the Engineer of scheduled seeding operations 24 hours prior to seeding applications. Do not begin seeding operations until the Engineer has approved seedbed preparations. Locate and flag all irrigation heads, valve covers, utility facility covers, etc. prior to commencing seed application operations.

Leave the seeded area lightly tracked in order to establish a better environment for seed germination.

Furnish seed tags from the seed supplier to the Engineer for verification of quantity and type.

Submit an available substitution to the Engineer, for approval, if a grass variety is not available.

Do not disturb or drive on newly seeded areas. Repair any damage to the seeded areas as directed.

Item 166 - Fertilizer

Provide and use a granular, commercial-grade, 15-5-10 analysis, "SCU" slow release fertilizer, applied at 660 lbs/acre.

Apply fertilizer prior to seeding.

Item 168 - Vegetative Watering

Water newly seeded or sodded grass areas with a minimum of one quarter (1/4) of an inch per day for 30 consecutive days.

Water newly seeded or sodded grass areas from a tanked, spray-equipped vehicle capable of spraying water to all such areas without driving or trailering the vehicle on said areas.

Furnishing and apply water containing less than 10,000 parts per million solids (as determined by evaporation).

Item 216 – Proof Rolling

Provide a 25 ton roller, or other equipment approved by the Engineer for proof rolling.

Item 251 - Reworking Base Courses

Store salvaged base material in stockpile(s) as designated by the Engineer.

Proof roll, as directed by the Engineer.

Before replacing salvaged material, construct and shape subgrade, using density control in accordance with Article 132.3.D.2.

Item 265 – Fly Ash or Lime-Fly Ash Treatment (Road-Mixed)

Use "Type CS" fly ash, at the target rate of 6 percent by weight, based on an estimated unit weight of 120 pounds per cubic foot, unless otherwise directed by the Engineer. The actual rate to be used will be based on laboratory tests that yield a strength of 200 psi at a lateral pressure of 15 psi unless otherwise directed by the Engineer.

Proof roll, as directed by the Engineer.

Use a vane feeder system to distribute the fly ash.

Asphalt material will not be permitted for curing.

Item 275 – Cement Treatment (Road Mixed)

Use the target rate of 3 percent by weight, based on an estimated unit weight of 120 pounds per cubic foot, unless otherwise directed by the Engineer. The actual rate to be used will be based on laboratory tests that yield a strength of 200 psi at a lateral pressure of 15 psi unless otherwise directed by the Engineer.

Use a vane feeder system to distribute cement.

Proof roll, as directed by the Engineer.

Asphalt material will not be permitted for curing.

Item 302 - Aggregates for Surface Treatments

Precoat aggregate with asphalt of the type and grade approved by the Engineer. Use an anti-stripping agent, of the type and at a rate approved by the Engineer. The use of flux oil is not permitted.

Cure precoated aggregate a minimum of 72 hours before applying the aggregate to the roadway surface.

Aggregate will be subjected to five cycles of the magnesium sulfate soundness test in accordance with Test Method Tex-411-A. The loss shall not be greater than 25 percent.

Item 310 - Prime Coat

Apply a prime coat to all finished flexible and salvage base due to receive asphaltic concrete pavement or surface treatments.

Cure the prime coat for a minimum of 72 hours before placing any asphaltic material on the primed surface, unless otherwise authorized by the Engineer.

Item 316 - Surface Treatments

Remove all excess aggregate by brooming after sufficient curing has occurred but no later than the end of the day, as directed by the Engineer. Remove all excess aggregate from the project in curb and gutter sections, and other areas as directed by the Engineer.

Schedule the placement width for all asphalt surfaces in a manner such that all joints will coincide with proposed lane lines (+/- 6 inches).

Leave signs and barricades in place until all brooming and the application of the center stripe is completed, unless otherwise directed by the Engineer.

Set a string line for all surface treatment operations, unless otherwise directed by the Engineer. Remove the string line daily.

Use medium pneumatic tire rollers, as directed by the Engineer.

Do not use flat wheel rollers.

Asphalt storage tanks may be used.

Place a one course surface treatment full width upon completion of the work to seal and dress up the areas where temporary pavement markings have been placed for traffic relocation during construction. Use aggregate and asphalt type, and rates as directed.

Items 340, 342, 344, 346, 3224 – Hot Mix Asphalt Pavement

Provide a summary spreadsheet for each lot in accordance with Article 520.2 of the Standard Specifications.

Place mixture when the roadway surface temperature is equal to or higher than the temperatures listed in Table 1 below unless otherwise approved or shown on the plans. Measure the roadway surface temperature with a handheld infrared thermometer. The Engineer may allow mixture placement to begin prior to the roadway surface reaching the required temperature requirements if conditions are such that the roadway surface will reach the required temperature within 2 hrs. of beginning placement operations. Unless otherwise shown on the plans, place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable in the opinion of the Engineer.

Table 1
Minimum Pavement Surface Temperatures

		Minimum Pavement Surface Temperatures in Degrees Fahrenheit	
Specification Item Number	High Temperature Binder Grade	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations
Items 340, 344, 346 & 3224	PG 64	50	50
	PG 70	70[1]	70[1]

Note 1: Contractors may pave at temperatures 10°F lower than the values shown in Table 1 when utilizing a paving process or equipment that eliminates thermal segregation. In which cases, the contractor must use either an infrared bar attached to the paver, or a hand held thermal camera, to demonstrate to the satisfaction of the engineer that the uncompacted mat has no more than 10°F of thermal segregation.

The Engineer will take asphalt samples to perform Dynamic Shear Rheometer (DSR) testing at the beginning of the project and randomly throughout the project to verify compliance. These tests will be performed at the district laboratory. If the district test fails, cease production, unless otherwise authorized by the Engineer. Any costs or delays associated to testing will be solely the responsibility of the Contractor.

If the VMA fails, take corrective action. If consecutive tests fail, cease production, unless otherwise authorized by the Engineer, until the ability to produce the desired material can be demonstrated to the satisfaction of the Engineer.

Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed by the Engineer. Measure and record the temperature of the mixture as discharged from the truck or material transfer device prior to entering the paver and an approximate station number on each ticket. Calculate the daily and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day. The Engineer may suspend production if the Contractor fails to produce haul tickets and yield calculations by the end of paving operations for each day.

Item 340 – Dense-Graded Hot-Mix Asphalt (Method)

The target lab density for all dense graded HMAC is 97.5%, unless otherwise directed or approved.

Design Ty B HMAC with a minimum of 5% asphalt.

PG 64-22 asphalt is required for this project.

The addition of 1 percent lime will be required by the Engineer, in all hot mix. Introduce lime in such a way that it will be in wet intimate contact with the aggregate by adding lime to wet aggregates and processing the mixture through a pugmill, unless otherwise authorized in writing by the Engineer.

Remove and replace any hotmix with in-place air voids greater than 8%

Place hot mix to repair core holes in lifts not to exceed three inches the same day or as directed by Engineer. Use slide hammering or other approved method in order to achieve compaction. Tack coat the inside vertical face of the core holes with AC or PG asphalt prior to filling the holes.

Provide PG or AC asphalt for tack coat, unless otherwise directed.

Tack coat all vertical joints.

RAP generated through required work is available for the Contractor's use in dense graded HMAC.

Item 344 – Performance-Designed Mixtures

PG 70-28 asphalt is required for this project.

Aggregate will be subjected to five cycles of the magnesium sulfate soundness test in accordance with Test Method Tex-411-A. The loss shall not be greater than 25 percent.

The addition of 1 percent lime will be required by the Engineer, in all hot mix. Introduce lime in such a way that it will be in wet intimate contact with the aggregate by adding lime to wet aggregates and processing the mixture through a pugmill, unless otherwise authorized in writing by the Engineer.

Place hot mix to repair core holes in lifts not to exceed three inches or as directed by Engineer. Use slide hammering or other approved method in order to achieve compaction. Tack coat the inside vertical face of the core holes with AC or PG asphalt prior to filling the holes.

Use a trackless tack coat, unless otherwise directed.

Tack coat all vertical joints with trackless tack coat, unless otherwise directed.

Design the mixture at Ndes = 50, or as directed by the Engineer.

Fly ash, Cement and kiln dust will not be allowed to be used as mineral fillers.

RAP generated through required work is available for the Contractor's use.

If RAP is used in the mixture design, provide fractionated RAP.

Design the mixture with stone on stone contract and passes below the reference zone in Table 7.

Item 346 – Stone-Matrix Asphalt

Place surface hot mix between May 1 and September 30.

PG 70-28 asphalt is required for this project.

Design the mixture to ensure stone on stone contact.

Aggregate will be subjected to five cycles of the magnesium sulfate soundness test in accordance with Test Method Tex-411-A. The loss shall not be greater than 20 percent.

Place hot mix to repair core holes in lifts not to exceed three inches or as directed by Engineer. Use slide hammering or other approved method in order to achieve compaction. Tack coat the inside vertical face of the core holes with AC or PG asphalt prior to filling the holes.

Use a trackless tack coat, unless otherwise directed.

Tack coat all vertical joints with trackless tack coat, unless otherwise directed.

Cement and kiln dust will not be allowed to be used as mineral fillers.

Design the mix at Ndes = 50, or as directed by the Engineer.

RAP generated through required work is available for the Contractor's use in the SMA.

If RAP is used in the mixture design, provide fractionated RAP.

Item 360 - Concrete Pavement

Multiple piece tie bars will be required.

Saw cut the perimeter of the concrete paving and seal with a class 5 or class 8 joint-sealant materials and fillers conforming to Item 438, "Cleaning and Sealing Joints."

Use Method B, as shown on JS-94, to seal joints.

A pre-paving meeting will be required.

Submit a paving plan detailing the location of joints and the sequence of paving to the Engineer a minimum of seven days before paving begins.

CRCP will be designed using the Optimized Aggregate Gradation (OAG) procedure, in accordance with Tex-470-A.

Design the CRCP with a minimum of 10% fly ash. Class C Fly ash will be allowed.

Maturity method, Tex-426-A, will not be allowed to estimate concrete strength for early opening to traffic.

Use Test Method Tex-418-A, "Compressive Strength of Cylindrical Concrete Specimens" to determine 7-day job control strength.

The pay limits for concrete paving will not include curb and gutter sections, even when the curb and gutter is placed monolithically with the concrete paving. For measurement and payment purposes, curb and gutter sections are considered 24 inches wide.

New concrete paving adjacent to existing concrete paving will require a neat saw cut edge and dowelling as per Item 361 regardless whether transverse or longitudinally. This work will be considered subsidiary to Item 360.

Item 400 - Excavation and Backfill for Structures

Furnish crushed caliche or sand and gravel as aggregate for flowable backfill.

Construct fill over structures to plan grade before hauling with heavy equipment over structures.

Compact backfill used for structures, other than flowable backfill, to a minimum density of 95 percent.

Use a template in order to secure reasonably accurate Class C shaping of the foundation material outside of cement stabilized areas.

Item 402 - Trench Excavation Protection

Maintain trench protection to protect State inspectors and Contractors during testing operations.

Item 420 - Concrete Structures

Furnish and place preformed fiber material, a minimum one-half (1/2)-inch thick, as shown on the plans or directed by the Engineer.

Furnish a temperature recorder with the minimum capabilities of a 7-day recording time, 2 degree F division, and 120 VAC with 9-volt backup, for each curing tank used on the project. Supply all charts, recording pins, and other equipment necessary for complete operation of the temperature recorder during the project. The temperature recorder and all associated equipment will not be paid directly, but will be subsidiary to the various bid items

Use Grade 3 coarse aggregate in all concrete structures.

All coring of concrete, at the discretion of the Engineer, shall be at the Contractor's expense including all prep work needed in order to perform the coring. Coring must be completed within 3 days of notice of failing 28-day samples; otherwise pay deductions apply using 28-day compressive strength.

Item 421 - Hydraulic Cement Concrete

Entrained air will be required in all concrete except drilled shafts.

The sodium sulfate soundness Test Method Tex-411-A is waived.

Supply 2 – 4' x 8' x ¾" sheets of plywood, in order to perform required testing procedures at the location of concrete placements.

Use 4-inch by 8-inch cylinder molds for concrete with Grade 3 or smaller coarse aggregate. Supply new cylinder molds and lids subsidiary to the various bid items.

Concrete plant must be capable of providing automated moisture content control for both coarse and fine aggregate.

Item 427 - Surface Finishes For Concrete

Provide rub finish for surface area of concrete surfaces within 24 hours of form removal.

Provide Ty II curing compound for all curb and gutter, sidewalks, driveways, curb ramps, riprap, and cast in place SET's.

Item 432 - Riprap

Provide 4-inch thick concrete riprap, unless otherwise indicated in the plans.

In large areas of riprap, provide one-half (1/2)-inch thick expansion joint material at approximately 15-foot intervals, or as determined by the Engineer.

Item 464 - Reinforced Concrete Pipe

Join all concrete culvert pipe with a cold-applied plastic asphalt sewer joint compound.

Item 467 - Safety End Treatment

Install riprap around all precast SETs.

Item 496 - Removing Old Structures

All removed items shown on the plans are property of the Contractor, unless shown otherwise.

All headwall, wingwall, riprap, or SET removals will be subsidiary to Item 100, with the exception of the Milwaukee Intersection items.

Item 502 - Barricades, Signs and Traffic Handling

Prior to beginning construction, the Engineer shall approve the routing of traffic and sequence of work.

Additional signs and barricades as directed by the Engineer shall be considered subsidiary to Item 502.

Provide flashing portable arrow panels for all lane closures.

Wash the channelizing devices and barricades following each rainfall or snowfall event and at times deemed necessary by the Engineer.

To ensure the safety and convenience of traffic, flaggers may be required when construction machinery is being operated along, across, or adjacent to lanes carrying traffic. If considered necessary by the Engineer, supplemental signs and barricades may be required.

Fill any holes left by barricade or sign supports and restore the area to its original condition.

Provide heavy duty "green" springs for dual chevrons on projects requiring flexible support systems.

Use the CW21-1T “Give Us A Brake” sign on this project.

Traffic switches will not be permitted on Fridays or any working day preceding a holiday unless authorized by the Engineer.

Cones or chevrons may be used in lieu of vertical panels at the discretion of the Engineer. Cones cannot be used to separate opposing traffic.

Construct temporary ramps to maintain access to driveways and city streets as directed by the Engineer. Temporary ramp construction is subsidiary to Item 502.

The Contractor shall bid the traffic control plan shown in the plans. Any proposed alterations to the TCP (combining work areas / phasing / etc.) shall be submitted to the Engineer at least 10 days prior to anticipated changes.

Even when not explicitly shown in the project TCP, vertical panels shall be used with an opposing lane divider every 5th panel in accordance with BC(9) for all opposing traffic conditions without a positive barrier.

Square tubing sign supports may be used for temporary construction signs. Aluminum and wood signs may be mounted if the vertical supports are embedded into the ground. Square tubing supports on skids which are typically held in place with sand bags can only support signs made of light weight flutted plastic.

Item 504 - Field Office and Laboratory

Furnish one Type B structure and one Type D structure.

Partition the floor of the Type D structure into a minimum of three interconnected rooms. Furnish each room with a door. Type D structure must have at least two windows and two exterior doors. Block and tie down portable structures.

Equip the Type D field lab with an eyewash facility capable of flushing the eyes for at least 15 minutes, connected to the main water supply or an approved stand-alone water supply.

Encompass the field office only with a fence enclosure providing a minimum 6.5-foot clearance around the perimeter of the field office.

Furnish all field offices with running water, potable water and sewer connections for restrooms.

Furnish all field offices with a surge protector at the circuit breaker.

Construct the parking area with material such as reclaimed asphalt pavement, asphalt stabilized base or other non-weathering materials as approved by the Engineer.

The Contractor will be required to furnish a concrete testing machine meeting TxDOT Specification Number 845-06-21 (latest revision). This shall also include platen sets, retainer caps, and compression pads (60 durometer) for testing of 4” x 8” cylinders. The compression testing machine will be set up at a location approved by the Area Engineer. Upon completion of the project, the compression testing machine will be returned to the Contractor.

Item 506 - Temporary Erosion, Sedimentation, and Environmental Controls

Place a weatherproof bulletin board containing the TCEQ required information on the project at a site directed by the Engineer. Post the following documents: (1) "TCEQ TPDES Storm Water Program" Construction Site Notice; (2) TCEQ "Notice of Intent"; and (3) TCEQ "TPDES Permit." Place rain gauge(s) at locations designated by the Engineer. At the completion of the contract, the bulletin board will become the property of the State and will remain in place until 70 percent vegetation coverage has been obtained.

Provide long-term, Type 1 construction exits, located at the Contractor's equipment storage area. This work will be subsidiary.

Construction exits will be washed or turned weekly and as directed by the Engineer. This will be considered subsidiary.

BMPs will be placed and relocated as directed by the Engineer in order to comply fully with the SW3P requirements.

The soil area disturbed by this project, including all disturbed areas within the limits of this project as described in the Contract and at Contractor project specific locations (PSLs) within one mile of the project limits, contributes to the establishment of the Texas Commission on Environmental Quality (TCEQ) Construction General Permit (CGP) requirements for storm water discharges. The Department will obtain an authorization from the TCEQ to discharge storm water for construction activities shown on the plans. The Contractor shall obtain the required authorization from the TCEQ for Contractor project specific locations (PSLs) for construction support activities off the right-of-way. As directed by the engineer, the Contractor shall obtain any required authorization from the TCEQ for on-site PSLs. When the total area disturbed within the project limits and at PSLs within one mile of the project limits exceeds five acres, the Contractor shall provide a copy of the Contractor's Notice of Intent (NOI) submission and Construction General Permit for PSLs on the right-of-way to the Engineer (and submit a copy of NOIs to appropriate MS4 operators).

Item 508 - Constructing Detours

Provide detour sections consisting of 4 inches of Base HMAC on prepared subgrade to lines and grades directed by the Engineer.

Any drainage pipe or SETs required for detours is subsidiary to this Item. The minimum pipe size is 18 inches.

Item 512 - Portable Concrete Traffic Barrier

The location of the designated sources are at the Marsha Sharp Freeway and Drive of Champions Exit or at the NE Maintenance Office.

Item 529 - Concrete Curb, Gutter, and Combined Curb and Gutter

Place one-half (1/2)-inch pre-molded expansion joint material at 40-foot intervals and at the beginning and end of all radii. Place 3/25-inch grooved or sawed construction joints, as directed by the Engineer, spaced equally, with the spacing not to exceed ten feet between joints.

Curb and gutter may be placed monolithically with concrete paving in areas where they are adjacent to each other. In the event of monolithic placement, concrete for curb and gutter will meet the requirements of concrete pavement as specified in Item 360, and the reinforcing steel will

be extended to the back of the curb. Measurement and payment for curb and gutter placed monolithically with the CPCR will be by the foot as specified in Item 529, "Concrete Curb, Gutter and Combined Curb and Gutter."

Two-piece tie-bars are required to connect to CRCP.

Item 530 – Intersections, Driveways, and Turnouts

Use Class A Concrete for all concrete driveways.

Reinforce concrete driveways with # 4 bars on 12” spacing centered in the slab depth.

Item 531 - Sidewalks

Construct concrete sidewalks at least four inches thick, reinforced with 6- x 6-inch W3 x W3 welded wire reinforcing fabric (or its equal) centered in the slab depth. The locations and details shown on the plans may be field modified by the Engineer.

Approved fiber reinforcement may be used in place of welded wire reinforcing.

In areas where there is no curb fillet or concrete pavement, saw cut the existing curb and gutter and remove the curb.

Construct curb ramps in conformance with details shown on the plans. The accessibility of the curb ramps shall be according to the "Americans with Disabilities Act (ADA)."

When lack of right of way width or obstructions creates insufficient space, the ramp may be relocated within the right of way when authorized by the Engineer. All deficient ramps will be removed and replaced at the Contractor's expense.

Form tooled joints on each side of the four-foot wide ramp section, and. at each break in ramp slope or geometry, and at four-foot intervals as if it were sidewalk. Place asphalt expansion joint material between proposed ramps and existing concrete.

All curbs on curb ramps will not be paid for directly but are considered subsidiary to the various bid items.

Schedule work such that two-way traffic is provided through all intersections and intersecting streets at all times, unless otherwise authorized by the Engineer.

Chicago-brick-red truncated dome brick pavers are required for all curb ramps.

Item 545 – Crash Cushion Attenuators

Use Absorb 350 or equivalent as approved by Engineer, for temporary crash cushion attenuator placements.

Item 560 - Mailbox Assemblies

Move and replace all mailboxes within the project limits such that they may be served by the mail carrier from his car at all times during and after construction. This work will be considered subsidiary to the various bid items of this contract.

Item 585 - Ride Quality for Pavement Surfaces

Use Surface Test Type B.

"Pay Adjustment Schedule" number 2 will be used on this project

Corrective action, when required, shall be diamond grinding, as approved and directed by the Engineer.

Item 610 – Roadway Illumination Assemblies

Fabricate steel roadway illumination poles in accordance with TxDOT standards RIP-2011 (Roadway Illumination Poles -2011). Poles fabricated according to RIP-2011 require no shop drawings.
Alternate designs to RIP 2011 or the use of aluminum to fabricate poles will require the submission of shop drawings electronically.

For instructions on submitting shop drawings electronically go to TxDOT home page, Business with TxDOT, Bridge information, Shop drawings.
File is titled: Guide to Electronic Shop Drawing Submittal.

Use materials for pre-qualified material producers list as shown on the Texas Department of Transportation (TxDOT) web site under- Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies.

Item 618 - Conduit

The location of conduit is diagrammatic and may be varied to meet local conditions upon approval of the Engineer. All couplings and connections shall be tight and waterproof. Trenching depths shall provide a minimum of 2.5 feet (30 inches) of cover unless otherwise approved by the Engineer. The Contractor must ensure that conduit is not damaged during trench or bore pit backfilling operations. No conductors shall be pulled through conduit until all backfilling for the

conduit run is complete and the template, having a diameter of not less than 75 percent of the inside diameter of the conduit, has been drawn through the conduit. Open ends of all conduit shall be fitted with temporary caps or plugs to prevent entry of dirt or debris during construction operations. A non-metallic pull rope shall be used to pull electrical conductors and traffic signal cables through non-metallic conduit. A 1/4-inch nylon or polypropylene pull rope shall be pulled through each conduit run and shall remain in the conduit for future use. A minimum of three feet of pull rope shall be neatly left coiled in the ground boxes at each end of the conduit run. The pull rope will not be paid for directly but shall be considered subsidiary to Item 618, "Conduit." After the work is completed, the Contractor shall restore any curbs, walks, driveways or raised concrete medians which have been damaged or disturbed to an equivalent original condition and to the satisfaction of the Engineer. This work shall not be paid for directly but shall be considered subsidiary to Item 618, "Conduit."

Use schedule 40 PVC conduit for the traffic portion of this project. Bore the conduit runs placed under driveways and street or highway approaches. Maintain a minimum of 30 inches below the proposed natural ground elevation or 36 inches below the existing driveway or proposed top of pavement. Backfill trenches the same day or erect plastic fencing to discourage entry into the trenched area by pedestrians or vehicles.

High-density polyethylene (HDPE) pipe may be threaded and used with threaded PVC connectors or couplings.

PVC conduit systems that snap or lock together without glue that are designed and UL listed to be used for bored PVC electrical conduit applications will be allowed for bored PVC schedule 40 or schedule 80, when approved by the Engineer. No additional compensation will be paid to the Contractor when these specific purpose conduit systems are substituted for this purpose.

All conduit elbows and rigid metal extensions required to be installed on PVC conduit systems will not be paid for separately, but will be considered subsidiary to the various bid items.

Install a continuous bare or green insulated copper wire No. 6 AWG or larger in every conduit throughout the electrical system in accordance with the electrical detail sheets (ED) and the latest edition of the National Electrical Code.

Identify and locate any existing utilities within the limits of this project that may interfere with the installation of conduit. The Contractor is responsible for any damage done to any existing underground conduit or utilities. Replace any damaged underground conduit or utilities. Replacement is the responsibility of the Contractor and will be done at the Contractor's expense and to the satisfaction of the Engineer.

Item 620 – Electrical Conductors

Grounding conductors that share the same conduit, junction box, ground box or structure shall be bonded together at every accessible point in accordance with the electrical detail sheets (ED), and the latest edition of the National Electrical Code.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Texas Department of Transportation (TxDOT) materials producers list. Category is "Roadway Illumination and Electrical Supplies". Fuse holder is shown on list under Items 610 & 620.
Provide 10 amp time delay fuses.

A minimum length of 2 feet for each conductor and/or cable shall be neatly coiled in each ground box and 3 feet of additional conductor and/or cable shall be neatly coiled in each controller cabinet. This shall be subsidiary.

Item 644 - Small Roadside Sign Supports and Assemblies

All YIELD and STOP signs for intersecting roadways placed inside the clear zone of the main roadway and less than 7 feet in height as measured from the main roadway require a retroreflective wrap on the sign support. This wrap shall be 12 inches in height, visible in all directions and shall be placed 4 ft. above the roadway. The color shall be red. This retroreflective wrap will not be paid for directly but considered subsidiary to Item 644.

Stake all sign locations, and receive approval from the Engineer, prior to sign placement.

The triangular slip bases will be the two bolt clamp type (Southern Plains Fabrication or equivalent).

Perform the following work subsidiary to Item 644.
For all signs designated for removal:

- Salvage plywood 48" X 48" and larger, if not rotted or delaminated, and all aluminum signs,
- Palletize and band salvaged aluminum signs,
- Stockpile signs at the following location as directed by the Engineer.

Contact Person:	Bud Justus	806-748-4477
Address:	135 Slaton Road	
	Lubbock, TX 79404	

Item 662 - Work Zone Pavement Markings

Use traffic buttons for 4” white or yellow temporary pavement markings on concrete pavement.

Water base paint may be used for all non-removable striping if authorized by the Engineer.

Use short-term removable striping as directed by the Engineer.

Do not place guide markers on a finished surface unless they fall on a proposed lane line. Remove Stick-down markings prior to final marking.

Remove tabs after standard pavement markings have been placed. Cut off tabs or remove by a method acceptable to the Engineer.

Remove buttons, RPM’s, and adhesives as directed by the Engineer. Payment for this work is subsidiary to Item 662.

Item 672 - Raised Pavement Markers

Install raised pavement markers as "Reflective Raised Pavement Markers for Vehicle Positioning Guidance" as shown on standard sheet PM(2).

Item 677 - Eliminating Existing Pavement Markings and Markers

Eliminate existing pavement markings by Methods B, C, or D only.

Payment for covering a solid yellow line with a broken yellow line next to it, parallel to the centerline of the highway, will be by the linear foot. This payment will be made only once for two stripes side-by-side.

Item 678 - Pavement Surface Preparation for Markings

Use dry sandblasting for pavement surface preparation for markings.

Item 682 - Vehicle and Pedestrian Signal Heads

Provide pedestrian signal indications using symbol type and astro bracket mounted with CGB or galvanized pipe nipple.

Provide aluminum vehicle and pedestrian signal heads for this project.

Item 684 – Traffic Signal Cables

A minimum length of 2 feet for each conductor and/or cable shall be neatly coiled in each ground box and 3 feet of additional conductor and/or cable shall be neatly coiled in each controller cabinet. This shall be subsidiary.

No splicing of cables is allowed.

Item 730 - Roadside Mowing

Mow full-width from pavement edge to Right-of-Way line 3 times. The Engineer shall dictate the times to mow and the areas in the project to mow.

Item 734 – Litter Removal

Perform litter removal prior to mowing.

Item 738 – Cleaning and Sweeping Highways

Cleaning and sweeping existing pavements will be bi-monthly or as directed by the Engineer.

Tracking of mud/dirt from construction vehicles on roadways shall be cleaned daily as required.

Payment for this work will be subsidiary to the various bid items.

Item 6473 - Multipolymer Pavement Markings (MPM)

Mark the location of standard pavement markings, including barrier lines, no passing zones, gores, and transitions adjusting to meet latest standards or as directed by the Engineer.

The performance period for the project will not begin until all the striping has been completed. After completion of all work and removal of the barricades, time charges will be suspended. Final acceptance will not be granted until the performance period for pavement markings is complete. If replacement markings are needed, traffic control for moving operations will be required. No payment will be made for traffic control during replacement striping work. All traffic control work shall be considered subsidiary to the project's replacement striping work.

The yellow or white long-line striping for re-striping operations will not lag one another by more than four (4) working days.

Item 6834 - Portable Changeable Message Sign

Provide messages as directed by the Engineer.

Provide 2 solar powered changeable message signs for this project.

Item 8703 – Audible Pedestrian Signal Units

Provide push buttons for pedestrian actuation meeting current ADA requirements.

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